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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,703	09/26/2003	Loren Dean	MWS-035	9252
959 7590 08/23/2007 LAHIVE & COCKFIELD, LLP ONE POST OFFICE SQUARE BOSTON, MA 02109-2127			EXAMINER VERDI, KIMBLEANN C	
			ART UNIT 2194	PAPER NUMBER
			MAIL DATE 08/23/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/671,703	Applicant(s) DEAN ET AL.	
	Examiner KimbleAnn Verdi	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 and 23 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
WILLIAM THOMSON  
SENIOR PATENT EXAMINER

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is in response to the Amendment filed on May 23, 2007. Claims 19-44 are pending in the current application. All previously outstanding objections and rejections to the Applicant's disclosure and claims not contained in this Action have been respectfully withdrawn by the Examiner hereto.

#### ***Response to Amendment***

1. Amendment to the drawings and specification overcomes the previous objections to the drawings and specification.

Amendment to claim 36 overcomes the previous objection to the claim.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 19 and 34 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 19-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 19, line 8 and claim 34, line 6, recite "a data server (object) for sending to the multiple data sink objects". However the specification does not disclose the data server (object) sending to the multiple data sink objects, though "sending to" may be implied by "providing to" it is not specified in the disclosure. Claims 20-33 and 35-44 are rejected since they are dependent on claims 19 and 34.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19-22, 27-29, 31, 33-34, 36, and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,256,625 B1 to Breyer et al. (hereinafter Breyer) in view of U.S. Patent 6,748,450 B1 to Dutta.

7. As to claim 19, Breyer teaches the invention substantially as claimed including a data transfer system for transferring data from a data source to multiple data sink objects in a computer system, wherein the data source is coupled to the computer, the system comprising:

an interface for communicating with the data source to receive the data from the data source (IMAQ Control Object, Fig. 5, col. 2, lines 35-36);

a data processor for encapsulating the data into a data object in the memory (CPU 202, Fig. 2); and

sending to the multiple data sink objects identification information identifying the data object (step 408, Fig. 7),

wherein the multiple data sink objects access the data object using the identification information and share the data object with other data sink objects to prevent extraneous copies of the data (IDispatch Interface, col. 7, lines 64-67 and col. 8, lines 1-2).

Breyer does not explicitly disclose a data server.

However, Dutta teaches a data server (e.g. web server, 200, Fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the memory of Breyer with the teachings of a web server from Dutta because this feature would have provided a mechanism for an overloaded or partially functional Web server to keep track of the clients that send requests, and to send the data at a later time in a different session of the network communication (col. 3, lines 27-30 of Dutta).

8. As to claim 20, Breyer as modified teaches the system of claim 19 wherein the data server includes a list listing the multiple data sink objects (e.g. database) that are registered with the data server (server will have to keep track of the client using a database or other tracking means, col. 5, lines 18-19 of Dutta).

9. As to claim 21, Breyer teaches the system of claim 19 wherein the computer system provides a technical computing environment (video capture system, col. 2, lines 23-33).

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10. As to claim 22, Breyer teaches the system of claim 19 wherein the data server provides a pointer indicating the location of the data object in the memory to identify the data object (IDispatch Interface, col. 7, lines 64-67 and col. 8, lines 1-2).

11. As to claim 27, Breyer teaches the system of claim 19 wherein the data source provides data sequence continuously for a period of time (sequence of image data, col. 4, line 37).

12. As to claim 28, Breyer teaches the system of claim 19 wherein the data source provides a package of data, the package of data being used independently of other packages of data (compressed data, col. 4, line 37).

13. As to claim 29, Breyer teaches the system of claim 28 wherein the package of data includes a frame of image data (video frame, col. 4, lines 31-37).

14. As to claim 31, Breyer teaches the system of claim 19 wherein the data processor configures a maximum amount of memory that all data objects use at a given instance of time (col. 6, lines 64-67, col. 7, lines 1-2).

15. As to claim 33, Breyer teaches the system of claim 19 wherein the interface, the data processor, and the data server are implemented independently of MATLAB (image application, col. 6, lines 51-54).

16. As to claim 34, this claim is rejected for the same reasons as claim 19, see the rejection to claim 19 above.

17. As to claim 36, this claim is rejected for the same reasons as claim 21, see the rejection to claim 21 above.

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18. As to claim 42, Breyer teaches the medium of claim 34 wherein the instructions are run independently of MATLAB (image application, col. 6, lines 51-59).

19. As to claim 43, Breyer teaches the medium of claim 34 wherein the instructions are originated from code written with C programming language (col. 11, line 41).

20. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,256,625 B1 to Breyer, as modified by U.S. Patent 6,748,450 B1 to Dutta, as applied to claim 19 above, and further in view of U.S. Patent 5,986,667 to Jevans.

21. As to claim 23, Breyer as modified by Dutta does not explicitly teach at least one or more data listener object that is registered to a respective one of the multiple data sink objects.

However, Jevans teaches one or more data listener object that is registered to the multiple data sink object (Registering a renderer, col. 11, lines 40-55).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the image object of Breyer as modified by Dutta with the teachings of a renderer from Jevans because this feature would have further provided a mechanism which allows retained-mode building and editing of a model, independently of the choice of renderer in a graphics rendering system (col. 5, lines 57-60 of Jevans).

22. As to claim 24, Breyer as further modified teaches the system of claim 23 wherein the respective data sink object deletes each of the at least one data listener objects registered with the data sink object when the respective data sink object is deleted (object delete function, lines 40-55 of Jevans).

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23. As to claim 25, Breyer as further modified teaches the system of claim 23 wherein the respective data sink object notifies each of the at least one data listener when state of the respective data sink object changes

(ErWF\_Register.TypeChangedMethod, col. 11, lines 45-67, col. 12, lines 1-20 of Jevans).

24. As to claim 26, Breyer as further modified teaches the system of claim 23 wherein the respective data sink object notifies each of the at least one data listener when the respective data sink object is updated with a new data object

(ErWF\_Register.AttributeSetChangedMethod, col. 11, lines 45-67, col. 12, lines 1-20 of Jevans).

25. Claims 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,256,625 B1 to Breyer, as modified by U.S. Patent 6,748,450 B1 to Dutta, as applied to claims 19 and 28 above, and further in view of U.S. Patent Application Publication 2003/0041163 A1 to Rhoades et al. (hereinafter Rhoades).

26. As to claim 30, Breyer as modified by Dutta does not explicitly teach wherein the package of data includes a scan of radar, sensor, or audio data, as well as network data packets.

However, Rhoades teaches wherein the package of data includes a scan of radar, sensor, or audio data, as well as network data packets (paragraph 0127).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the image data of Breyer as modified by Dutta with the teachings of a data packet from Rhoades because this feature would



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have further provided a new processor architecture that is suitable, specifically but not exclusively, for Data Flow processing problems (paragraph 0010 of Rhoades).

27. As to claim 32, Breyer as further modified teaches the system of claim 19 further comprising a processor for controlling the interface, the data processor, and the data server, wherein the processor is 64 bits or more (ALU of processor, paragraph 0088 of Rhoades).

28. Claims 35, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,256,625 B1 to Breyer, as modified by U.S. Patent 6,748,450 B1 to Dutta, as applied to claim 34 above, and further in view of U.S. Patent 6,823,524 B1 to Hewett.

29. As to claim 35, Breyer as modified by Dutta does not explicitly teach a data sink listener object that is registered with one or more of the data sink objects.

However, Hewett teaches a data sink listener object that is registered with one or more of the data sink objects (event generator object (A) 30, Fig. 5, event listener object (B) 32, Fig. 5, col. 4, lines 27-30, and step 64, Fig. 6, col. 4, lines 61-64).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the image object of Breyer as modified by Dutta with the teachings of an event object from Hewett because this feature would have further provided a mechanism for a object-oriented data processing system which uses events to pass control from an event generator object to a listener object (col. 1, lines 21-25 of Hewett).

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30. As to claim 37, Breyer further as modified teaches the medium of claim 35 wherein the data sink listener object performs a task relating to a function of a respective one of data sink object (object B can receive and execute event E1, col. 4, lines 3-9 of Hewett).

31. As to claim 38, Breyer as further modified teaches the medium of claim 35 wherein the data sink listener object performs a task relating to a function of a respective one of the data sink object on a thread of the data server object (run on common thread, col. 4, lines 24-25 of Hewett).

32. As to claim 39, Breyer as further modified teaches the medium of claim 35 wherein the data sink listener object performs a task relating to a function of a respective one of the data sink object on a thread different from that of the data server object (NLS objects run on separate threads 46, 50, Fig. 5, col. 4, lines 40-45 and step 86, Fig. 7 of Hewett).

33. As to claim 40, Breyer as further modified teaches the medium of claim 34 wherein at least one of the data sink object perform a function on a thread of the data server object (step 82, Fig. 7 of Hewett).

34. As to claim 41, Breyer as further modified teaches the medium of claim 34 wherein at least one of the data sink object perform a function on a thread different from that of the data server object (event generator object passes event objects in separate threads, col. 4, lines 50-53 of Hewett).

35. Claims 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,256,625 B1 to Breyer, as modified by U.S. Patent 6,748,450 B1 to Dutta, as

applied to claim 34 above, and further in view of "C# and the .Net Framework: The C++ Perspective" by Powell et al. (hereinafter Powell).

36. As to claim 44, Breyer as modified by Dutta does not explicitly teach wherein the instructions are originated from code written with an object-oriented programming language such as C++, C# and Java.

However, Powell teaches wherein the instructions are originated from code written with an object-oriented programming language such as C++, C# and Java (Part II, Chapter 2.1.C# Basics, lines 3-4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the programming code of Breyer as modified by Dutta with the teachings of an object-oriented programming language from Powell because this feature would have further provided a modern object-oriented language that was designed for the expressiveness of C++ with RAD style development and the design and evolution of C# was influenced by such languages as C++, SmallTalk, Java and other OO languages (Part II, Chapter 2.1.C# Basics, lines 1-4 of Powell).

### ***Conclusion***

37. The prior art made of record on the accompanying PTO-892 and not relied upon, is considered pertinent to applicant's disclosure.

38. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571) 270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 13, 2007

KV



WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER